United States District Court,
N.D. California.

The REGENTS OF THE UNIVERSITY OF CALIFORNIA & VYSIS,
Plaintiffs.
v.
ONCOR, INC,
Defendant.

No. C-95-3084-VRW

Aug. 19, 1997.

ORDER.

VAUGHN R. WALKER**, District Judge.**

The Regents of the University of California ("the University") own United States Patent No 5,477,841 ("the '841 patent"), which was issued on September 5, 1995, to co-inventors, Drs Joe W. Gray and Daniel Pinkel. The patent resulted from United States Application Serial Number ("SN") 627,707, filed December 14, 1990, and was a continuation in part of SN 819, 314, filed January 16, 1986. The patent is for "Methods for Chromosome-Specific Staining" and describes a more efficient means of identifying the location of unique DNA sequences on specific chromosomes.

Techniques for mapping DNA take advantage of the chemical principle that unique DNA or RNA (generically referred to as "nucleic acid") sequences hybridize (renature or anneal) to complementary sequences. One technique involves the labeling of nucleic acid sequences that are complementary to the sequence that researchers wish to locate. These labeled "probe" sequences are released into an environment that contains the "target" nucleic acid sequence and they bind to complementary sequences. Researchers can identify the location of target DNA sequences by tracking the probe nucleic acid sequence after it has hybridized with the target. This process is known as in situ hybridization when it occurs on intact, or morphologically identifiable, chromosomes or cell nuclei.

One problem with this DNA mapping technique is that nucleic acid sequences must be substantially similar in order to hybridize. Probe sequences pair up with their brothers and sisters, not just their twins. Consequently, probe nucleic acid sequences will hybridize with target chromosomal DNA and also with repetitive sequences that are not of interest to the researchers. As a result, researchers must release a large collection of the labeled probes into the environment containing the target DNA sequences to ensure that at least some of the probes hybridize with target sequences. Since most of the hybridizations involve repetitive sequences that are not the subject of the investigation, there is a substantial amount of "noise" that makes it more difficult to detect the target chromosomal DNA sequences.

With earlier technology, researchers dealt with the noise problem by statistical analysis. They mapped the

location of target DNA sequences by performing a statistical analysis of all hybridizations to determine where on a chromosome the probe sequences were more likely to hybridize; thus separating the twins from the brothers.

Drs Gray and Pinkel experimented with another approach. Rather than detecting through the noise, Drs Gray and Pinkel tried to eliminate enough noise to enable them to detect the target DNA sequences using standard laboratory equipment. One approach, which they later abandoned, involves physically removing repetitive nucleic acid sequences from the probe mixture. Another approach uses unlabeled nucleic acid sequences to block many of the labeled nucleic acid sequences from binding to complementary sequences other than the target chromosomal DNA. This "blocking approach," which had previously been used in other chromosomestaining contexts, is incorporated into the '841 patent.

The '841 patent has seventeen method claims of which only claim 1 is in independent form. Claim 1 reads as follows:

A method of staining target chromosomal DNA comprising:

(a) providing 1) labeled nucleic acid that comprises fragments which are substantially complementary to nucleic acid segments within the chromosomal DNA for which detection is desired, and 2) blocking nucleic acid that comprises fragments which are substantially complementary to repetitive segments in the labeled nucleic acid; and

(b) employing said labeled nucleic acid, blocking nucleic acid, and chromosomal DNA in in situ hybridization so that labeled repetitive segments are substantially blocked from binding to the chromosomal DNA, while hybridization of unique segments within the labeled nucleic acid to the chromosomal DNA is allowed, wherein blocking of the labeled repetitive segments is sufficient to permit detection of hybridized labeled nucleic acid containing unique segments, and wherein the chromosomal DNA is present in a morphologically identifiable chromosome or cell nucleus during the in situ hybridization.

'841 patent, col 17, lines 4-25.

In more generally understood terms, claim 1 of the '841 patent involves the following two steps. First, the researcher obtains a probe mixture that contains both (1) labeled nucleic acid sequences that are complementary to the target chromosomal DNA sequence and (2) unlabeled nucleic acid sequences that are used to block repetitive sequences. Second, these probe sequences are released into the environment containing the target DNA sequences so that, after hybridization, researchers can detect the target DNA sequences on "a morphologically identifiable chromosome or cell nucleus."

Oncor, Inc (" *Oncor* ") is a Maryland corporation that markets numerous DNA probes that are used for chromosome-staining in in situ hybridization. These probes are classed into several subgroups, including Coatasome Probes, Telomere Probes, Quint-Essential Probes and Unique Sequence Probes. These DNA probes contain labeled DNA sequences as well as unlabeled blocking DNA sequences. The University contends that Oncor directly infringes the '841 patent by its research and that Oncor induces infringement of the patent by instructing its customers to use its products in the methods of claims 1 and 6.

On November 22, 1996, the University filed motions for (1) claim interpretation, (2) summary adjudication of novelty and nonobviousness, (3) summary adjudication on best mode, (4) summary adjudication of

infringement, and (5) to exclude several of defendant's declarations. On that same date, Oncor filed motions for (1) claim construction, (2) summary judgment of invalidity of the '841 patent under 35 USC s.s. 102 and 103, (3) summary judgment on the unenforceability of the '841 patent, and (4) summary judgment of noninfringement. For the reasons described below, the court GRANTS the University's motion for summary adjudication of novelty and nonobviousness under 35 USC s.s. 102 and 103; DENIES IN PART, and STRIKES IN PART Oncor's motion for summary judgment on unenforceability; GRANTS IN PART, and DENIES IN PART the University's motion for summary judgment regarding best mode; GRANTS IN PART, and DENIES IN PART the University's motion for summary adjudication of infringement; and DENIES Oncor's motion for summary judgment of noninfringement.

I

In Markman v. Westview Instruments, Inc, 52 F3d 967 (Fed Cir1995), aff'd, 116 SCt 1384 (1996), the Federal Circuit set forth a two-step process for infringement analysis. First, the *court* must determine the "meaning and scope of the patent claims asserted to be infringed." Id at 976. Second, the *jury* must compare the properly construed claims to the device accused of infringing. *Id*.

When interpreting claim terms, the court should begin with the words contained in the patent claims. See Vitronics Corp v. Conceptronic, Inc, 90 F3d 1576, 1582 (Fed Cir1996). These words should be given their ordinary English meaning unless the patent text or file history indicates otherwise. See, e.g., Transmatic, Inc v. Gulton Industries, Inc, 53 F3d 1270, 1277 (Fed Cir1995). If, however, the patent specification defines these terms differently from their common meaning, the court must defer to these definitions. See Vitronics, 90 F3d at 1582. Any remaining ambiguities should be settled by reference to the prosecution history of the patent or by other cannons of claim construction. See id; Southwall Technologies, Inc v. Cardinal IG Co, 54 F3d 1570, 1576 (Fed Cir1995) (citations omitted).

The primary dispute in this case concerns the meaning of the final phrase of step (b) of claim 1, which reads:

and wherein the chromosomal DNA is present in *a morphologically identifiable chromosome or cell nucleus* during the in situ hybridization.

'841 patent, col 17, lines 22-25 (emphasis added). The University argues that this phrase is limited to the singular and means that the '841 patent permits researchers to detect unique DNA sequences on a single chromosome or cell nucleus. Oncor contends that the phrase merely clarifies that the target chromosomal DNA are present in intact chromosomes or cell nuclei, but does not limit the number of these structures.

A

An examination of the disputed text does not reveal a single ordinary English meaning. Oncor contends that use of the indefinite article "a" or "an" in a patent claim means "one or more." Reply at 2. In support of this contention, Oncor notes that a renowned patent treatise defines "a" or "an" as connoting "one or more when used in a claim." Id. See Robert G. Faber, Landis on Mechanics of Patent Claim Drafting 531 (3d ed 1990). Moreover, in the context of statutory interpretation, several courts have interpreted the article "a" as referring to the plural. See, e.g., People v. Carter, 142 Cal Rptr 517, 520 (Cal Ct App 1977); Application of Hotel St. George Corp, 207 N.Y.S.2d 529, 531, 532 (N.Y. Sup 1960).

On the other hand, many regard the standard English meaning of "a" or "an" to be singular. The Webster's

Ninth New Collegiate Dictionary states that "a" is "used as a function word before singular nouns." *Id* at 43. When used in patent law, at least one court has interpreted the article "a" as referring to only one. See, e.g., Application of Zickendraht, 319 F.2d 225, 231 (Cust & Pat App 1963) (Rich, J, concurring); *Hastings v. Brown,* 1 E1 & B1 450, 454, 118 Eng Rep 505 (KB 1853). Other courts have construed as limited to the singular in the context of statutory interpretation. See, e.g., Savin Rock Arcade, Inc v. Fitzpatrick, 160 F Supp 775, 776 (D Conn), aff'd, 259 F.2d 904 (1958); Harward v. Commonwealth, 330 SE 2d 89, 91 (Va 1985). Thus, while the article "a" can mean "one or more," the court must look to the patent specification and history to determine whether the "inventors here intended it to have other than its normal singular meaning." See North American Vaccine, Inc v. American Cyanamid Co, 7 F3d 1571, 1575-76 (Fed Cir1993).

B

Several references in the patent specification suggest that the method described in the '841 patent permits detection of unique DNA sequences on a single chromosome or cell nucleus. Although the patent describes in situ hybridization generally as involving multiple chromosomes or cell nuclei, see ' 841 patent, col 3, lines 13-17, the method described in claim 1 is limited to "a * * * chromosome or cell nucleus." Id at col 17, lines 23-24. The target "chromosomal DNA *is* present" in this morphologically identifiable structure. Id at col 17, line 23 (emphasis added). Moreover, the patent lists as its preferred embodiment "selecting from the clones hybridization probes to unique sequence regions of a *particular chromosome*." Id at col 5, lines 58-63 (emphasis added). The example depicted in the patent is one that involves only a single chromosome. Id at Fig 1C. Most importantly, the patent specification states that the invention "can be viewed as a large collection of hybridization probes to unique sequence regions of a *specific chromosome*." Id at col 5, lines 56-58 (emphasis added). This indicates that the phrase "a morphologically identifiable chromosome or cell nucleus" should be read in the singular.

1

In response, Oncor correctly points out that much of the evidence relied on by the University consists of specific embodiments of the invention which cannot serve as claim limitations. See, e.g., Constant v. Advanced Micro-Devices, 848 F.2d 1560, 1571 (Fed Cir1988); Laitram Corp v. Cambridge Wire Cloth Co, 863 F.2d 855, 865 (Fed Cir1988); Locacite Corp v. Ultraseal Ltd, 781 F.2d 861, 867 (Fed Cir1985). This, however, is not a case in which the claim language is completely silent with respect to the limitation proposed by the plaintiff and the plaintiff is attempting to add extraneous limitations that appear in the specification but not in the claim. Compare Intervet America, Inc v. Kee-Vet Laboratories, Inc, 887 F.2d 1050, 1053 (Fed Cir1989). Nor is this a case where the ordinary English meaning of the claim language clearly suggests one interpretation and the plaintiff argues for a contrary interpretation based on examples in the patent specification. Compare Constant v. Advanced Micro-Devices Inc, 848 F.2d 1560, 1571 (Fed Cir1988). Instead, this case involves a situation in which the language of the claim is susceptible to two alternative interpretations, and the court must determine what is meant by this language by referring to the patent specification and its history. See Vitronics, 90 F3d at 1582. The examples and preferred embodiments of the patent, therefore, may shed some light on the meaning of the disputed phrase.

2

Next, Oncor argues that several exchanges in the prosecution history suggest that the last phrase of step (b) was added to clarify the form of the target DNA, rather than their number. This evidence consists, in part, of statements by the applicant that the amended language was added to address the examiner's concern that the

chromosomal DNA could have been processed prior to hybridization, Willard Decl, Exhibit 9, at 4, and makes clear that the chromosomal DNA retain their morphological detail, *id* at 5.

This evidence, however, does not resolve the issue currently before the court. Oncor cannot succeed on its claim merely by focussing on the intent of the parties to the prosecution of the '841 patent. The Federal Circuit made clear in Markman v. Westview Instruments, Inc, 52 F3d 967, 986 (Fed Cir1995), aff'd, 116 SCt 1384 (1996), that:

[t]he focus in construing disputed terms in claim language is not the subjective intent of the parties to the patent contract when they used a particular term. Rather the focus is on the objective test of what one of ordinary skill in the art at the time of the invention would have understood the term to mean.

Taken in its most favorable light, the evidence presented by Oncor merely suggests that the applicants were not contemplating the number of chromosomes or cell nuclei that contain the target chromosomal DNA when they added the last phrase of claim 1; it does not suggest that the phrase was intended to refer to multiple chromosomes or cell nuclei. Such evidence cannot change the plain meaning of a "specific chromosome" to something other than the singular.

3

The above discussion reveals that it is at least equally plausible that the phrase "a morphologically identifiable chromosome or cell nucleus" refers to a single chromosome or cell nucleus, as opposed to multiple chromosomes or cell nuclei. The Federal Circuit has set forth the following rule of construction for such situations:

Where there is an equal choice between a broader and narrower meaning of a claim, and there is an enabling disclosure that indicates that the applicant is at least entitled to a claim having the narrower meaning, we consider the notice function of the claim to be best served by adopting the narrower meaning.

Athletic Alternatives, Inc v. Prince Mfg. Inc, 73 F3d 1573, 1581 (Fed Cir1996); see also Ethicon Endo-Surgery, Inc v. United States Surgical Corp, 93 F3d 1572, 1581 (Fed Cir1996) ("[T]o the extent that the claim is ambiguous, a narrow reading which excludes the ambiguously covered subject matter must be adopted."). Since the patent specification and history indicate that the narrower construction of the last phrase of step (b) of claim 1 is at least as plausible as the broader construction, the court concludes that it refers to a single chromosome or cell nucleus.

II

The parties also dispute the meaning of the term "designed to allow" as it is used in claim 6 of the '841 patent. Claim 6 reads:

The method of claim 1 wherein the labeled nucleic acid comprises fragments which are *designed to allow* detection of extra or missing chromosomes, extra or missing portions of a chromosome, or chromosomal rearrangements.

'841 patent, col 18, lines 1-5 (emphasis added). Oncor argues that this phrase should be interpreted as "capable of." The University contends that "designed to allow" means "intentionally selected to achieve the detection goals set forth in the claim."

The ordinary English meaning of the word "design" is "to plan or have in mind as a purpose; intend." Webster's Third New International Dictionary, at 611. "Allow" means "to make a possibility; provide opportunity or basis." Id at 58. Since there is nothing in the patent history or specification that contradicts these ordinary English definitions, the court interprets the phrase "designed to allow" as "intentionally selected to make possible the detection goals set forth in the claim."

III

Having construed the disputed terms of the '841 patent, the court turns next to the dispositive motions filed by the parties. Oncor has moved for summary judgment on: (1) invalidity of the '841 patent under 35 USC s.s. 102 and 103; (2) unenforceability of the '841 patent due to inequitable conduct; and (3) noninfringement. The University has filed for summary adjudication on (1) nonobviousness and novelty, (2) best mode, and (3) infringement.

Summary judgment is properly granted when there are no genuine issues of material fact and the moving party is entitled to judgment as a matter of law. Anderson v. Liberty Lobby, Inc, 477 U.S. 242, 248-50 (1986); Scripps Clinic & Research Foundation v. Genentech, Inc, 927 F.2d 1565, 1571 (Fed Cir1991). The movant's burden is to show that, even if all material factual inferences are drawn in favor of the non-movant, the movant is entitled to judgment as a matter of law. *Id*. Summary judgment is available in patent cases as in other areas of litigation. Nike Inc v. Wolverine World Wide, Inc, 43 F3d 644, 646 (Fed Cir1994); Continental Can Co USA, Inc v. Monsanto Co, 948 F.2d 1264, 1265 (Fed Cir1991).

IV

The statutory requirement that a patented invention be "new" is tested in accordance with 35 USC s. 102, which provides:

A person shall be entitled to a patent unless-

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for the patent, or

(b) the invention was patented or described in a printed publication in this or a foreign country in public use or on sale in this country, more than one year prior to the date of the application for patent in the United States * * *, or

* * *

(g) before the applicant's invention thereof the invention was made in this country by another who had not abandoned, suppressed, or concealed it. In determining priority of invention there shall be considered not only the respective dates of conception and reduction to practice of the invention, but also the reasonable diligence of one who was first to conceive and last to reduce to practice, from a time prior to conception by the other.

All three of these sections refer to types of anticipation: section 102(a) refers to anticipation by prior knowledge; section 102(b) by prior public use; and section 102(g) by prior invention. See Hybritech Inc v. Monoclonal Antiboidies, Inc, 802 F.2d 1367, 1379 (Fed Cir1986).

A

Oncor claims that the '841 patent was anticipated under 35 USC s. 102 by the prior work of Dr Timothy A. Donlon and Dr Michael Litt. In November 1984, Dr Donlon performed a series of experiments in which he allegedly stained and detected unique DNA sequences contained in morphologically identifiable chromosomes by in situ hybridization. Like the method described in claim 1 of the '841 patent, Donlon allegedly used two nick translated human DNA probes containing both unique and repetitive sequences and he blocked the repetitive sequences from hybridizing to target DNA by using excess unlabeled blocking DNA. Donlon was able to detect unique DNA sequences on morphologically identifiable chromosomes by using frequency distribution tables revealing the sites where the hybridizations were most likely to occur. See Donlon Dep, at 257:19-258:9; Donlon Decl, at Exhibits N & O. Since these experiments allegedly were in public use more than a year prior to the filing of the '841 patent application and constitute literal embodiments of claims 1, 2, 11 and 13 of the patent, Oncor contends that these claims are invalid under 35 USC s. 102(b). Similarly, since these experiments were publicly known at that time, Oncor alleges that claims 1, 2, 11 and 13 of the '841 are invalid under 35 USC s. 102(a).

In early 1985, Dr Michael Litt and his colleague, Dr Ellen Magenis, were alleged to have successfully performed in situ hybridizations for staining chromosomal DNA using blocking nucleic acid. Specifically, Dr Litt used radioactively labeled whole cosmids, which were believed to contain both unique and repetitive sequences, as probes against Southern blots of genomic DNA. After repetitive sequences in the human genome were blocked with unlabeled genomic DNA, unique sequences in the cosmid probes hybridized to various bands within the Southern blots. Dr Litt allegedly was able to detect the precise location of the probe on a specific chromosome by using a histogram to chart the location where a statistically significant number of probe sequences hybridized with the target chromosomal DNA. Litt Decl, at para. 25. He allegedly published his work in scientific journals as early as January 1986. Oncor claims that Dr Litt's work invalidates claims 1, 2, 11, 12 and 13 of the ' 841 patent under 35 USC s. 102(g), since it reduced those claims to practice before the patentee's invention was conceived. Oncor also claims that Litt's work invalidates the '841 patent under 35 USC s. 102(a) because it was known by others in this country before the '841 patent was invented.

B

To prevail on a claim of invalidity under 35 USC s. 102(a), the defendant must establish by clear and convincing evidence that an identical invention was previously known to others and, thus, the patent being asserted by the plaintiff is not new. See Continental Can, 948 F.2d at 1267. Under section 102(b), the plaintiff must demonstrate that the patented invention was "publically used" more than one year prior to the application date. To qualify as prior art under section 102(g), the plaintiff must demonstrate by a preponderance of the evidence that the prior invention was either (1) reduced to practice before the patented invention, or (2) conceived before the patented invention and then diligently reduced to practice. See Scott v. Finney, 34 F3d 1058, 1061 (Fed Cir1994).

Under each of these sections of 35 USC s. 102, the plaintiff must show that the prior art contains every limitation of the claimed invention. See Hoover Group, Inc v. Custom Metalcraft, Inc, 66 F3d 299, 302 (Fed Cir1995) (s.s. 102(a) and (b)); Elmer v. ICC Fabricating Inc, 67 F3d 1571, 1574 (Fed Cir1995) (s. 102(b)); Hybritech Inc v. Monoclonal Antibodies, Inc, 802 F.2d 1367, 1379 (Fed Cir1986) (s. 102(g)). Analysis of anticipation by prior art must begin with a proper construction of the claim. See, e.g., Glaverbel Societe Anonyme and Fosbel, Inc v. Northlake Marketing & Supply, Inc, 45 F3d 1550, 1554 (Fed Cir1995).

C

To make out its claim of anticipation, Oncor implicitly relies on its interpretation of the phrase "a morphologically identifiable chromosome or cell nucleus" as involving multiple target chromosomes or cell nuclei. Without the benefit of this broad interpretation of step (b) of claim 1, Oncor's anticipation and obviousness defenses fall short as a matter of law.

Both the Donlon and Litt experiments involve radioactive labeling of DNA probes followed by statistical analysis of multiple cells to determine the presence of a signal. Dr Donlon was able to map the location of target chromosomal DNA only by using a frequency distribution chart which showed that about 23 percent of the hybridizations occurred over the target as opposed to other locations. See Donlon Dep, at 257:19-258:9; Donlon Decl, at Exhibits N & O. Although Dr Donlon initially claimed that he could detect a signal on a single chromosome or cell nucleus, he later admitted that such detection was made possible only by the use of statistical analysis of numerous cells. See Donlon Dep, at 257:7-258:15. In fact, rather than claim that Dr Donlon's experiments contained the same limitations as step (b) of claim 1, Oncor argues that his "[i]n situ hybridizations were performed on morphologically identifiable chromosomes in metaphase spreads." Gordon Decl, Exhibit 16 (emphasis added).

The Litt experiments also involved the use of statistical methods to map unique chromosomal DNA sequences. Specifically, Drs Litt and Magelis used histograms to detect the precise location of hybridized probe on a specific chromosome. Litt Decl, at para. 25. As a result, Drs Litt and Magelis admitted in their depositions that they could not detect a unique DNA sequence in a single chromosome or cell nucleus. See Litt Dep at 88:12-89:14; Magenis Dep at 127:14-23. This suggests that the prior art relied on by Oncor for its anticipation defenses does not permit detection of target chromosomal DNA on a single chromosome or cell nucleus as is required under step (b) of claim 1. See part I. More importantly, Oncor has presented no evidence that this prior art met this limitation of the '841 patent. The court thus concludes that no rational jury could find that Oncor has established that the '841 patent was anticipated by the prior work of Drs Donlon and Litt. Accordingly, the University's motion for summary adjudication regarding anticipation under 35 USC s. 102 is GRANTED.

V

Oncor also contends that claims 3-10, 12 and 14-17 of the '841 patent are invalid under 35 USC s. 103 because they were made obvious by the work of Drs Litt and Donlon described above. 35 USC s. 103 provides:

A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains.

To determine whether a claim is obvious under section 103, the court considers three general categories: (1) the scope and content of the prior art, (2) the level of ordinary skill at the time the invention, and (3) the differences between the prior art and the claimed invention, Graham v. John Deere Co, 383 U.S. 1, 17 (1966). If a comparison of the prior art to the claim language reveals that the claimed subject matter would have been obvious to a person of ordinary skill in the art, the claim is invalid under section 103.

The evidence described above conclusively establishes that the experiments performed by Drs Donlon and Litt necessarily involve the examination of multiple chromosomes of cell nuclei to detect the target chromosomal DNA. Thus, the court must determine whether the Donlon and Litt experiments made it obvious to a person skilled in the art FN1 that unique DNA sequences could be detected on a single target chromosome or cell nucleus.

FN1. There is no dispute that the level of ordinary skill in the ar is one who has a PhD or MD in genetics, molecular genetics cytogenetics, molecular biology or nucleic acid biochemistry wit experience in nucleic acid hybridization principles, or one with a advanced degree with considerable experience in nucleic acid hybridizations and their applications.

Prior to the experiments performed by Drs Gray and Pinkel, DNA mapping by in situ hybridization typically involved statistical analysis of numerous cells. The '841 patent, by contrast, describes a method of identifying the location of target chromosomal DNA on particular chromosomes using standard laboratory equipment. Oncor presents no evidence that this progression was obvious. Quite the contrary, two of plaintiff's experts and one of Oncor's experts indicate that it was not obvious. See Harper Decl, at para. 73; Miller Decl, at para.para. 26-30; Willard Dep at 129:3-24. Thus, Oncor has failed to raise a genuine issue of material fact that claim 1 of the '841 patent was made obvious by prior art. Since claims 2-10, 12, and 14-17 are dependant on claim 1, Oncor has not met its burden with respect to these claims as well. Accordingly, the University's motion for summary adjudication of nonobviousness is GRANTED.

VI

Next, the court will consider Oncor's motion for summary judgment on the unenforceability of the '841 patent. To invalidate a patent based on inequitable conduct, the defendant must provide clear and convincing evidence that the patentee (1) has made an affirmative misrepresentation of material fact, failed to disclose material information, or submitted false material information with (2) an intent to deceive the patent office. Refac Int'l, Ltd v. Lotus Development Corp, 81 F3d 1576, 1581 (Fed Cir1996); Molins PLC v. Textron, Inc, 48 F3d 1172, 1178 (Fed Cir1995); Braun Inc v. Dynamics Corp of America, 975 F.2d 815, 822 (Fed Cir1992). "Information is 'material' when there is a substantial likelihood that a reasonable examiner would have considered the information in deciding whether to allow the application to issue as a patent." Refac, 81 F3d at 1581. There is an intent to deceive when "the involved conduct, viewed in light of all the evidence, including evidence indicative of good faith, must indicate sufficient culpability to require a finding of intent to deceive." Paragon Podiatry Laboratory, Inc v. KLM Laboratories, Inc, 984 F.2d 1182, 1189 (Fed Cir1993), quoting Kingsdown Medical Consultants Ltd v. Hollister, Inc, 863 F.2d 867, 876 (Fed Cir1989) (en banc). These elements are inversely related: the more material the misrepresentation, the less culpable the intent required, and vice versa. Halliburton Co v. Schlumberger Technology Corp, 925 F.2d 1435, 1439 (Fed Cir1991).

A

Oncor first alleges that Dr Pinkel declared that a person skilled in the art would not have looked to art relating to filter hybridization for a method useful in in situ hybridization despite evidence that scientists had considered and applied techniques from filter hybridization to in situ hybridization. When responding to the patent examiner's concern that the ' 841 patent was an obvious extension of prior art, Dr Pinkel submitted a declaration that:

As explained in detail below, the focus of the art prior to the filing of the grandparent to the above application on January 16, 1986, was on obtaining unique sequence probes, and a person skilled in that art would not have looked to the art relating to Southern hybridizations for a method useful in in situ hybridization.

Pinkel Decl, submitted February 12, 1993, at para. 6.

Therefore, it is my opinion that a person skilled in the art of in situ hybridization would not have considered the blocking technique of Sealy et al to be useful in in situ hybridization prior to the filing of our grandparent application in January 1986.

Id at para. 10. Oncor claims that these statements were known to be half-truths because Dr Pinkel was exposed to information that others in the field had recognized the applicability of the filter blocking technique to in situ hybridization.

Courts, however, rarely grant summary judgment on inequitable conduct, and the issue is not amenable to summary judgment if the facts of materiality or intent are reasonably disputed. Paragon Podiatry Laboratory, 984 F.2d at 1190. Assuming arguendo that the Pinkel declarations were not literally true and were material, there is insufficient evidence of an intent to deceive to warrant a grant of summary judgment on the inequitable conduct issue.

Although the Pinkel declarations are not literally true because some scientists might look to blocking techniques used in filter hybridization for guidance in the in situ hybridization context, the evidence does not establish beyond reasonable dispute that Pinkel intended that his words be taken literally. The declarations are preceded by the phrases "as explained in detail below" and "therefore," which suggests that they were meant to summarize the intervening paragraphs. The intervening paragraphs indicate that Pinkel's statements were made to clarify that it was not obvious to import techniques from filter hybridization to in situ hybridization due the enormous differences in the number of target DNA that are analyzed; these statements were not intended to make the examiner believe that no scientist would look to filter hybridization techniques for guidance in the in situ hybridization context.

This conclusion is buttressed by the fact that Drs Pinkel and Gray admitted to the patent examiner that their invention was an extension of the blocking technique used in filter hybridization to the filed of in situ hybridization. This admission appears on the face of the patent specification. *See* '841 patent, at col 9, line 66-col 10, line 2.

Moreover, the declarations were phrased as opinions rather than statements of fact. The first Pinkel declaration is preceded by the phrase "I disagree" in response to the suggestion that the '841 patent was an obvious extension of the filter hybridization prior art. The second declaration is preceded by "it is my opinion." Expressions of opinion ordinarily cannot form the basis for a finding of fraud. See, e.g., Kaufman Investment, Corp v. Johnson, 623 F.2d 598, 601 (9th Cir1980).

Rather than trying to deceive the examiner, the evidence suggests that Dr Pinkel was merely engaging in argumentation of his case on obviousness. At a minimum, there is a genuine issue of fact that this was his intent. Accordingly, Oncor's motion for summary judgment of unenforceability due to the declaration of Dr Pinkel is DENIED.

B

Oncor also alleges that Drs Pinkel and Gray committed inequitable conduct by withholding from the patent examiner information that blocking techniques for in situ hybridization had already been successfully used and reported by others. The University responds that the court should strike this inequitable conduct defense because Oncor has not specifically pled it in its answer.

FRCP 9(b) provides that "[i]n all averments of fraud or mistake, the circumstances constituting fraud or mistake shall be stated with particularity." Although the Federal Circuit has yet addressed whether Rule 9(b) applies to a defense of inequitable conduct, the general trend, including that in this district, requires that inequitable conduct be pled in accordance with the specificity requirement of Rule 9(b). See, e.g., Heidelberg Harris, Inc v. Mitsubishi Heavy Indus, Ltd, 1996 WL 680243, at * 2 (ND Ill 1996); Optical Coatings Laboratory, Inc v. Applied Vision, Ltd, 1995 WL 150513, at * 3 (ND Cal 1995); Chiron Corp v. Abbott Laboratories, 156 FRD 219, 222 (ND Cal 1994); Solarex Corp v. Arco Solar, Inc, 121 FRD 163, 178 (E.D.N.Y.1988), aff'd, 870 F.2d 642 (Fed Cir1989). This court agrees.

Application of Rule 9(b) to the facts of this case requires that Oncor's second inequitable conduct defense be stricken. Although Oncor specifically alleges in its answer that Drs Gray and Pinkel committed inequitable conduct by making material misrepresentations, Oncor does not allege in the pleadings that the applicants committed inequitable conduct by making material omissions. Notice in the form of discovery requests and in the moving papers cannot serve as a substitute for the pleadings. Accordingly, Oncor's inequitable conduct defense based on allegations of material omissions by the applicants are STRICKEN. Oncor may file a motion for leave to amend its answer to cure this defect not later than twenty days after the entry date of this order.

VII

Title 35 USC s. 112 provides that a patent specification must "set forth the best mode contemplated by the inventor of carrying out his invention." If it is proven that the applicant concealed the best mode of practicing the invention, section 112 provides an alleged infringer with an affirmative defense that invalidates the patent. The burden is on the alleged infringer to demonstrate by clear and convincing evidence that the patent violated the best mode requirement. Transco Products, Inc v. Performance Contracting, Inc, 38 F3d 551, 560 (Fed Cir1994). Whether the patent satisfied the best mode requirement is a question of fact. Id at 559.

The federal circuit has set forth a two-step inquiry that governs the best mode requirement. The first step is wholly subjective and focusses on "whether the inventor knew of a mode of practicing the claimed invention that he considered to be better than any other at the time he filed his application." Id at 560. The second step is objective and requires the court to assess whether the disclosure in the specification is adequate to enable one skilled in the art to practice this best mode. *Id*. In other words, "[a] best mode violation may occur if the disclosure of the best mode is so objectively inadequate as to *effectively* conceal the best mode from the public." United States Gypsum Co v. Nat'l Gypsum Co, 74 F3d 1209, 1215 (Fed Cir1996).

Oncor claims that the applicants violated section 112 in two respects. First, Oncor alleges that Drs Pinkel and Gray contemplated the use of single-stranded DNA probes as the best method of carrying out the '841 patent, but they did not adequately disclose this best mode in the patent specification. Second, Oncor alleges that the applicants effectively concealed their use of the enzyme RNase to perform their claimed invention.

A

In support of its claim that the applicants considered the use of single-stranded probes to be the best mode of practicing the '841 patent, Oncor has submitted the following evidence: (1) the notes of Dr Pinkel, allegedly created around the turn of year 1995, stating that "[s]ingle stranded RNA probes are the way to go", Gordon Decl, Exhibit 3, at UCV1937; (2) statements contained in the specification of another patent filed by the applicants in November 1996 that single-stranded DNA probes "increase[ ] the efficiency and specificity of hybridization mixtures by increasing effective probe concentration by eliminating self-hybridization between both probe and target DNA, and by reducing the amount of target DNA available for mismatched hybridizations," United States Patent No 5,028,525 ('525 patent), at col 2; (3) statements allegedly made by the applicants to the United States Department of Energy in June 1986 concerning a grandparent application to the '841 patent that the applicants had developed technology for making single-stranded probes which "increases the usefulness and commercial potential" of the in situ hybridization methods of the '841 patent, Gordon Decl, Exhibit 6, at UCV4704 & UCV4748.

1

Even when considered in its most favorable light, this evidence falls far short of that required under section 112. The note written by Dr Pinkel was taken out of context. While it indicates that Dr Pinkel was interested in considering the use of single-stranded probes to practice the '841 invention two years before the '841 patent application was filed, it says nothing about his state of mind at the time the '841 patent was filed. Pinkel's interest in the use of single-stranded probes seems to have cooled in the interim, as he testified that he never experimented with single-stranded probes in connection with the '841 patent in the relevant time period. Pinkel Dep, at 124:2-20. Pinkel's notes, therefore, do not create a genuine issue of material fact that he considered the use of single-stranded DNA probes to be the best mode of practicing the '841 patent at the time he filed the application.

2

The second item of evidence has almost no probative value for similar reasons. Even assuming that the inventors considered single-stranded probes the best mode of practicing the '541 patent, as that patent specification suggests, they did not use single-stranded probes when practicing the '841 patent, see Pinkel Decl, at para. 5. In the absence of evidence that suggests that Pinkel or Gray ever experimented with the use of single-stranded probes in connection with the '841 patent, no rational trier of fact could conclude that they conceived of the use of single-stranded probes as their preferred method.

3

Nor do the statements made to the Department of Energy create a triable issue of material fact regarding the inventors' state of mind. The petition submitted to the Department of Energy containing the reference to single-stranded probes appears to have been made by the University, not the inventors. Although the petition names Dr Gray as the inventor, it lists the University as the petitioner and it is signed by a person purporting to be the Acting Director of the Patent, Trademark, and Copyright Office of the University. Gordon Decl, Exhibit 6, at UCV04709. Oncor has presented no evidence linking the statement made in the petition to either of the inventors. In fact, Dr Gray testified in his deposition that he did not "have any input into the drafting of" the petition and he does not know the source of the statement at issue. Gray Dep, at 82:14-84:3. Thus, the evidence submitted by Oncor is insufficient to raise a triable issue of material fact on

the subjective element of the best mode standard. Accordingly, the University's motion for summary adjudication with respect to the use of single-stranded probes as the best mode of the '841 patent is GRANTED.

B

1

The court obtains a different result, however, with respect to Oncor's claim that the inventors effectively concealed the use of RNase treatment as the preferred method of practicing the '841 patent under certain circumstances. Oncor has presented three basic types of evidence in support of its claim. First, Oncor offers Dr Pinkel's lab notes and his October 1996 NIH grant application to demonstrate that Pinkel routinely used RNase in in situ hybridizations involving blocking probes within weeks of filing the '841 patent application. Gordon Decl, Exhibit 14, at UCV4131; Id, Exhibit 12, at UCV13563. Second, the inventors included RNase treatment as the standard protocol in the grant application submitted to the National Institute of Health ("NIH") in October 1986. Id, Exhibit 15, at UCV11213. Finally, Oncor points to the patent itself. Example VI, the only exemplified embodiment of the '841 patent, was based on an experiment that used RNase in in situ hybridization. See Pinkel Dep, at 205:1-23. Such evidence creates a factual dispute whether the inventors used RNase as their best mode in situations when blocking probes were used.

a

In response to the first item of evidence, the University criticizes Oncor for focussing exclusively on the experiments that used RNase. Moreover, the University claims that Oncor misconstrues the Pinkel experiments that used RNase because they were experimental and led Dr Pinkel to the conclusion that "RNase could often be eliminated."

This response, however, is insufficient to rebut Oncor's evidence on summary judgment. It is unclear whether Dr Pinkel reached the conclusion that RNase treatment is unnecessary before or after the '841 patent application was filed. Moreover, the statement leaves open the possibility that RNase was necessary in some, if not most, cases. In those cases, the use of RNase might have been the best mode.

b

Next, the University argues that "[w]hether the inventors used RNase in a particular experiment, during a period when they used it in some and not others, is not probative of whether they believed it was the best mode." While it is true that evidence of a particular experiment does not irrefutably establish that the inventors believed that RNase treatment was their best mode, the fact that the inventors chose to include an experiment that involves RNase as an example in the patent specification is probative of this issue because inventors typically use patent examples that are representative of their work.

c

In addition, the University has made no attempt to explain the inclusion of RNase as standard protocol in the inventors' 1986 grant application. Thus, Oncor has presented sufficient evidence to raise a triable issue of material fact whether the inventors appreciated the use of RNase as the best mode of practicing the '841 patent when they filed its application.

Oncor argues that the inventors effectively concealed their best mode by omitting any reference to RNase treatment in Example VI of the patent, the only experimental example of in situ hybridization using blocking probes in the ' 841 patent.

The University argues that its disclosure was sufficient because the patent specification referred to several guides that teach the use of RNase and the specification explicitly stated that "[i]n some cases pretreatment with RNase may be desirable," '841 patent, col 12, lines 6-8. Moreover, the University points out that the inventors were under no obligation to identify the best mode as such; they only needed to disclose it in a manner that would enable a person skilled in the art to practice the best mode of the invention. See Chemcast Corp v. Arco Indus Corp, 913 F.2d 923, 928 (Fed Cir1990). Since RNase treatment is well-known in the field of chromosome-staining, the University contends that its disclosures in the patent specification were sufficient to enable trained scientists to practice the best mode.

While these arguments have some merit, they do not eliminate all doubt about the adequacy of the disclosures. "Even where there is a general reference to the best mode of practicing the claimed invention, the quality of the disclosure may be so poor as to effectively conceal it." *Transco Prods Inc v. Performance Contracting, Inc*. 38, F3d 551, 560 (Fed Cir1994). Example V of the '841 patent refers to the use of RNase, but does not involve blocking probes. Example VI, by contrast, does not refer to RNase, but involves blocking probes. Since the patent states that RNase treatment is desirable in "some cases," the omission of any reference to RNase in Example VI might seem purposeful and mislead persons skilled in the art to believe that RNase treatment is not desirable in cases where blocking probes are used. Thus, there is a genuine issue of fact whether the disclosure in the patent was adequate. Accordingly, the court DENIES the University's motion for summary judgment on this issue.

VIII

The court turns next to infringement. Oncor markets DNA probes ranging from Coatasome Probes to Unique Sequence Probes for use in in situ hybridization. One-hundred-three of these probes are at issue in this case. The University contends that Oncor directly infringes the '841 patent by its research activities and that Oncor induces infringement of the patent by instructing its customers to use Oncor probes in the methods of claims 1 and 6. Both parties have filed for summary judgment.

A

To determine whether there is infringement, the factfinder must compare the claims in the patent to the allegedly infringing acts. Markman v. Westview Instruments, Inc, 52 F3d 967, 976 (Fed Cir1995), aff'd, 116 SCt 1384 (1996). A process infringes a method claim if the process includes every limitation set forth in the claim. Johnson v. IVAC Corp, 885 F.2d 1574, 1577 (Fed Cir1989). Even if the accused device performs functions in addition to those contained as elements of the patent claim, the patent in suit is infringed. Northern Telecom, Inc v. Datapoint Corp, 908 F.2d 931, 945 (Fed Cir1990). There can be no infringement as a matter of law, however, if a claim limitation is totally missing from the accused device. London v. Carson Pirie Scott & Co, 946 F.2d 1534, 1539 (Fed Cir1991).

To succeed on its motion for summary judgment, the University must show that the undisputed facts establish every element of the patent claims. See Atlanta Thermoplastics Co v. Fayex Corp, 970 F.2d 834, 837 (Fed Cir1992). Conversely, to succeed on its cross-motion for summary judgment, Oncor must

demonstrate only that there is an absence of evidence to support the University's infringement claim. Manchak v. N-Viro Energy Sys Ltd, 33 USPQ 2d 1281, 1283 (CD Cal 1994). The court will address these motions simultaneously.

The University alleges that Oncor infringes claims 1 and 6 of the '841 patent. Oncor does not dispute that its products meet all but two of the limitations of claim 1. Nor does Oncor contend that it does not infringe claim 6 if the court finds that it infringes claim 1. Instead, Oncor argues that its products do not infringe the '841 patent because (1) its labeled nucleic acid probes do not contain repetitive segments, in addition to unique segments; and (2) neither it nor its customers "exclusively examine[ ] *a single chromosome or nucleus* in a given sample to determine the location where each accused probe has stained the target." Opp at 2 (emphasis added).

B

The parties agree that the language of claim 1 requires that repetitive segments be present in the labeled nucleic acid probe. They disagree over whether Oncor's DNA probes contain such repetitive segments.

1

At the center of this dispute is the deposition testimony of Dr Jean Dietz-Band, Oncor's Director of Probe Development. Dr Dietz-Band made several admissions at her July 23-24, 1996, deposition, which the University has relied on to support its motion for summary judgment. On December 13, 1996, the court received a declaration and errata sheet from Oncor that attempted to clarify and correct Dietz-Band's deposition testimony. Because the errata sheet was not submitted within thirty days after Dr Dietz-Band was notified that her deposition testimony was available for review, the court will not consider any changes in the form or substance of the July 23-24, 1996, depositions. See FRCP 30(e). The court will, however, give due regard to the recent declarations by Dietz-Band to the extent that they clarify ambiguous statements in her earlier depositions.

2

Dietz-Band's testimony establishes that Oncor's Coatasome probes contain both unique and repetitive sequences. When asked about these probes at her July 24, 1996, deposition, Dr Dietz-Band testified "[t]hey contain unique sequence as well as repetitive that needs to be blocked." Dietz-Band Dep, at 26:11-14. She later stated: "I have reason to believe that repetitive sequences are present in [the Coatasome probes]." Dietz-Band Decl, at 3 n2. When these admissions are considered alongside the other evidence introduced by the University on this point, no rational trier of fact could find that Oncor's Coatasome probes do not contain repetitive sequences.

3

a

The evidence is not nearly so one-sided, however, with respect to Oncor probes other than the Coatasome Probes. In support of its motion for summary judgment, the University relies almost exclusively on two types of evidence. The first consists of the following exchange that occurred at the deposition of Dr Dietz-Band:

Q. So when you say that you don't develop unique sequences, you are telling me that you developed sequences that include both repetitive sequences and unique sequences and the blocking takes care of the repetitive part, is that right?

A. Yes.

Dietz-Band Dep, at 111:5-10. This testimony establishes that at least some of Oncor's probes contain repetitive sequences. It is unclear, however, what DNA probes are the subject of this exchange. If Dr Dietz-Band is referring to the Coatasome probes, this exchange has no probative value with respect to other Oncor products. Since the University has failed to connect Dr DietzBand's testimony to Oncor probes other than the Coatasome Probes, this evidence does not support the University's motion for summary judgment.

b

The other evidence submitted by the University to support its contention that Oncor probes other than the Coatasome probes contain repetitive sequences consists of evidence that Oncor uses, or encourages the use of, blocking DNA to suppress repetitive sequences in connection with its DNA probes. Illustrative of this evidence is the following deposition testimony of Dr Dietz-Band:

Q. You use the blocking DNA to suppress binding to repetitive sequences so that the unique sequences show the signal?

A. Right.

Dietz-Band Dep, at 30:14-17.

There are, however, two plausible interpretations of this testimony. First, the blocking DNA may be used because repetitive sequences are, in fact, present. Second, as was explained by Dr Dietz-Band in her most recent declaration, the blocking DNA might be used as a precautionary measure in the unlikely event that repetitive sequences are present. Since a jury could reasonably accept either of these explanations for the use of blocking DNA, the court finds a genuine issue of material fact regarding the presence of repetitive sequences in Oncor probes other than the Coatasome probes. The University's motion for summary adjudication with respect to these probes, therefore, is DENIED.

C

There remains the issue whether any of Oncor's probes display a detectable signal on a single chromosome or cell nucleus, as required by step (b) of claim 1. See part I. If the University establishes beyond reasonable dispute that Oncor's Coatasome probes display such a signal, the court must grant the University's motion for summary adjudication with respect to these products'. By contrast, the court will grant Oncor's motion for summary judgment with respect to all of the probes if there is an absence of evidence that the Oncor probes generate a detectable signal in a single chromosome or cell nucleus.

1

In support of its contention that Oncor's Coatasome probes create a detectable signal on a single chromosome or cell nucleus, the University offers a videotape produced by Oncor that shows that Oncor's Coatasome probes produce a visible signal detectable on a single identifiable chromosome. *See* Lewis Supp

Decl, Exhibit J; Id, Exhibit K, at 8:13-16 & 9:5-9. In addition, the University points out that Dr Dietz-Band testified in her deposition that the Coatasome probe is used to "light up a single human chromosome." Dietz-Band Dep, at 27:1-4. The burden thus shifts to Oncor to present evidence that raises a genuine issue of material fact on this issue.

a

Instead of arguing that its products do not create a detectable signal on an individual chromosome or cell nucleus, Oncor claims that researchers do not use its technology to "look at" a single chromosome or cell nucleus when identifying the location of a stain. In other words, Oncor claims that researchers who use its products examine not just one, but many cells.

Step (b) of claim 1, however, focuses on the objective results of the chromosome-staining process, not the activities of the researchers who monitor those results. Rather than limiting the number of cells that the researcher can examine, the last phrase of claim 1 mandates that the target DNA be present and detectable on a single chromosome or cell nucleus. See part I. Oncor's products read on this claim limitation if they create a signal detectable on a single chromosome or cell nucleus, even if researchers look at numerous cells.

b

In addition, Oncor argues that researchers use statistical methods of DNA mapping in connection with its DNA probes to identify the location of chromosome stains. This evidence is irrelevant to the extent that these statistical methods are used to validate the results obtained by researchers after they have identified a signal on a single chromosome or cell nucleus. In any event, this evidence of additional uses of Oncor's products cannot insulate the company from liability for infringement. See Northern Telecom, Inc v. Datapoint Corp, 908 F.2d 931, 945 (Fed Cir1990) ("Nor is infringement avoided if a claimed feature performs not only as shown in the patent, but also performs an additional function."); Radio Steel & Mfg Co v. MTD Prods, Inc, 731 F.2d 840, 848 (Fed Cir1984). Thus, Oncor has failed to offer any meaningful evidence in response to the evidence submitted by the University. Since no reasonable jury could find that Oncor's Coatasome probes do not create a detectable signal on a single chromosome or cell nuclei, the court GRANTS the University's motion for summary adjudication of infringement of claim 1 of the '841 patent with respect to Oncor's Coatasome probes. Since claim 6 applies the method of claim 1 to detect specified kinds of chromosomal abnormalities and the undisputed evidence establishes that Oncor used its Coatasome probes for this purpose, see, e.g., Lewis Supp Decl, Exhibit J, the court GRANTS the University's motion for summary adjudication on this claim as well.

2

With respect to Oncor Probes other than the Coatasome probes, the University introduces the following deposition testimony of Oncor's In Situ Lab Manager, Ms. Light, to support its contention that these probes create a detectable signal on a single chromosome:

Q. So that a probe that is used in [Oncor's] in situ hybridization will show a signal in each individual cell?

A. Well, in 70 to 90 percent of the cells.

Q. But the way you gauge it is cell by cell?

A. Each cell, you look at cells.

Q. It will generate if it's successful hybridization, a signal on DNA from a single cell?

A. Right.

Light Dep, at 60:13-61:6. Such evidence, by itself, creates a triable issue of material fact regarding the detectablity of unique sequences on a single chromosome or cell nucleus for probes other than the Coatasome probe. Since Oncor again has offered no meaningful rebuttal evidence, Oncor's motion for summary judgment with respect to these other probes is DENIED.

IX

Also pending before the court is the University's motion to exclude (1) the declaration of Dr Peter C. Harris, (2) the declaration of Dr Janet Shipley, and (3) portions of the declaration of Dr Huntington Faxon Willard. Since the court has not relied on these items in resolving the instant motions, it need not rule on these matters at this time.

X

For the foregoing reasons, the court ORDERS the following:

(1) The University's motion for summary adjudication of novelty under 35 USC s. 102 is GRANTED.

(2) The University's motion for summary adjudication of nonobviousness under 35 USC s. 103 is GRANTED.

(3) Oncor's motion for summary judgment on unenforceabilty of the '841 patent due to material misrepresentations by Dr Pinkel is DENIED.

(4) Oncor's claim of unenforceability of the '841 patent due to material omissions by the applicants is STRICKEN. Oncor may file a motion for leave to amend its answer to add this defense within twenty days of the entry of this order.

(5) The University's motion for summary adjudication regarding best mode is GRANTED IN PART and DENIED IN PART.

(6) The University's motion for summary adjudication of infringement is GRANTED IN PART and DENIED IN PART. Oncor's motion for summary judgment on infringement is DENIED.

XI

Having devoted a very lengthy time to the issues in the present motions, the undersigned has concluded this is one of those cases that may call for the appointment of a court-appointed expert. See FRE 706. The issues in this litigation are of unusual difficulty and complexity, involving questions well beyond and in a setting or context far removed from the regular ken of issues which courts are called upon to decide. The court is mindful of the encouragement which the Supreme Court has given to the use of such experts, see Daubert v.

Merrell Dow Pharmaceuticals, Inc, 509 U.S. 579, 595 (1993) (reminding courts that "Rule 706 allows the court at its discretion to procure the assistance of an expert of its own choosing"), and the need to ensure that the use of such experts not abdicate the responsibilities of the court. Still, the months entailed in the court's consideration of the issues here has caused an unreasonable delay in the resolution of the issues, resulting in an unfairness to the parties at bar and an unreasonable distraction from the demands of other cases.

Accordingly, the court directs the parties to meet and confer to consider the process by which the court can identify and appoint such an expert advisor, the appropriate scope of the expert's responsibilities and a schedule for the completion of the expert's duties. See FRE 706; Unique Concepts v. Brown, 659 F Supp 1008, 1011 (SDNY 1987). The court will conduct a case management conference on this subject on October 3, 1997, at 9:00 a.m., or such later date as available to the court and parties.

IT IS SO ORDERED.

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